Committee on Energy and Commerce

Hearing on
"Addressing the Urgent Needs of Our Tribal Communities"

July 8, 2020

Below are responses to the questions presented to Mr. Jonathan Nez, President, Navajo Nation.

The Honorable Anna G. Eshoo (D-CA):

1. **Please describe the connectivity challenges that students of Tribal colleges and universities (TCUs) operated or maintained by the Navajo Nation have experienced.**

RESPONSE:

There are two accredited institutions of higher education operating on the Navajo Nation, Diné College and Navajo Technical University ("NTU"). Diné College and NTU offer four-year programs with a few classes taught via remote learning. Diné College has six campuses across the Navajo Nation with its main campus in Tsaile, Arizona.[1] NTU's main campus is in Crownpoint, New Mexico, with four other instructional sites across the Navajo Nation.[2] Broadband is among the highest priorities and a critical need for our Tribal Colleges and Universities ("TCUs") institutional sites across the Navajo Nation.

Currently, students at our TCUs are experiencing difficulties with accessing their online courses due to the lack of availability for fixed broadband services. By the account of one mobile Wi-Fi pilot of 70 students completed by NTU, it was revealed that less than 10 percent (10%) of their students have access to fixed internet service in their home. The students that do not have access to fixed in-home internet rely upon their cellular wireless devices for accessing their lessons and assignments. Students without in-home internet have also received Wi-Fi hotspot devices along with a monthly pre-paid subscription. At first glance this appears to ameliorate the problem, however, these devices are limited by the cellular coverage that exists within the Navajo Nation, the data management plan caps, and the ongoing costs of these expensive devices. Generally, these devices come with a five (5) to eight (8) gigabyte data plan for a month of service. Once the student exceeds the pre-paid data plan limit, which typically occurs by the end of the second or third week of the monthly subscription, the student is then responsible for covering the added cost of increasing the data plan, which in some cases must be increased several times throughout the month. For a quick comparison, data plans for fixed cable modem users in Phoenix allow for 250 gigabytes of monthly data. In some cases, students accrue charges for roaming coverage due to the rural locations of their homes. For the majority of our higher education students accessing internet is costly and the short-term solution of pre-paid hotspot devices is not a sustainable solution.

Another issue our students and our TCUs are encountering is with remote telecommunications support. Students typically could get assistance with software and other online classroom tools

[1] https://www.dinecollege.edu/about_dc/locations/.
[2] http://www.navajotech.edu/.

while on campus from their instructors or from support staff. This type of support now must occur over the telephone or with other online classroom tools, like Zoom. However, our students also are in need of instruction on how to use Zoom as well as other tools such as Google Classroom and Microsoft Office.

NTU and Diné College have been active in support of innovative projects to improve connectivity and access to education during the COVID-19 pandemic by deploying telecommunications infrastructure in order to provide instruction, continue research, and provide services. As a result of successful National Science Foundation (NSF) cyberinfrastructure awards to improve external connectivity, improve networking for campus researchers, and to pilot 'homework gap' wireless projects, both campuses have deployed alternative wireless services using both Educational Broadcast System (EBS) and Citizens Broadband Radio Service (CBRS) in Crownpoint, NM and in Tsaile, AZ.

In partnership with non-profits such as MuralNet and eligible telecommunications carriers such as Sacred Wind Communications (SWC) of Yatahey, NM, NTU is planning to implement an advanced pilot to support 70 homes on Eastern Navajo that may be expanded throughout the fall of 2020 to several hundred locations and to continue expansion of EBS wireless services in Tsaile, Shiprock, and other locations. The pilot will demonstrate the use of EBS 2.5 GHz spectrum for home with internet services up to 100 Mbps.[3] This project will help inform the Navajo Nation's FCC auction to secure the EBS spectrum for tribal use.

In partnership with the National Science Foundation (NSF), the American Indian Higher Education Coalition (AIHEC) and Tribal Colleges and Universities have conducted an in-depth study of the cyberinfrastructure capacity and needs of TCUs and their students. The NSF-funded study found that TCUs have the slowest internet speeds of all institutions of higher education in the country and pay more on average than any other group for internet connectivity.

a. Would these issues be mitigated by my legislation, H.R. 6814, the *Supporting Connectivity for Higher Education Students in Need Act,* which creates a $1 billion fund for institutions of higher education (prioritizing TCUs and others) to fund at home broadband and internet devices for students?

RESPONSE:

Some of these issues would be mitigated by H.R. 6814, *Supporting Connectivity for Higher Education Students in Need Act,* in particular, provisions that would provide grant funding for broadband equipment and services to tribal colleges. This is critically important, but it's only part of the solution. Most Navajo homes lack affordable broadband access which students need to achieve their academic goals. The authorization of funds to support the cost of devices and broadband subscriptions is critical but can only be utilized by anchor institutions like Chapter houses, schools, and libraries--not by individuals. For personal hotspots to work, a student must have access to a tower (or satellite, which often has delays). That does not exist for many of our

[3] https://www.krqe.com/news/new-mexico/sacred-wind-communications-navajo-techincal-university-collaborate-to-make-5g-available-in-rural-communities/.

students, making personal hot spots useless. Additionally, even where services exist today, in many of these areas those services fail to meet the FCC definition of broadband.

A comprehensive strategy is necessary to meet the unique barriers that tribal communities face in accessing affordable high-speed broadband connectivity in the home. The lack of next generation communications and electric utility infrastructure throughout the Navajo Nation requires powerful incentives for new or existing carriers to expand their coverage areas.

Broadband providers face insurmountable barriers in gaining the necessary permitting authority to construct, build and deploy high speed wireless and fixed broadband infrastructure. As a result, there are few providers serving Navajo communities with affordable, high-quality service.

Efforts to simplify the existing federal permitting process by directing the Department of Interior Bureau of Indian Affairs (BIA) to collaborate closely with the relevant Navajo agencies involved in land management, telecommunications, and economic development. Reducing regulatory restrictions on permitting towers and other vertical assets, along with identification and mapping of existing infrastructure assets on Navajo trust lands, could help to create these incentives.

In addition to funding for devices and broadband subscriptions, the Navajo Nation lacks sufficient broadband and wireless coverage (by service providers) and fiber backbone for data backhaul throughout the Nation. As a result of this, Navajo students are at a significant disadvantage compared to their peers in well-served urban areas. Subsidies for operating expenses and devices go only a small way toward solving the problem. If Navajo Nation had similar infrastructure as regional urban areas, such as Albuquerque, Phoenix, Tucson, Denver, or Salt Lake City, H.R. 6814 would greatly help the Navajo Nation and our students. However, due to the lack of the fiber backbone and other telecommunication infrastructure, the reach of H.R. 6814, if it were to become law, would only assist those students that reside in areas where this infrastructure already exists, thereby still excluding the students that reside in the rural areas of the Navajo Nation.

2. To the degree this information is available and can be made public which companies provide at-home broadband service to the residents of your Tribe?

RESPONSE:

There are three local telecommunications companies that provide at-home broadband services for a select portion of the community: Choice Wireless,[4] Frontier,[5] and Sacred Winds.[6] Each service provider is limited by the availability of mid-mile and last-mile infrastructure. However, residents of the Navajo Nation also utilize other service providers for wireless internet connectivity.

[4] https://www.choice-wireless.com/broadband.html.
[5] https://go.frontier.com/availability/az/window-rock.
[6] https://sacredwindcommunications.com/residential-high-speed-internet/.

Based on a survey of broadband usage of Navajo Nation residences,[7] fewer than 2% of households (386 of 22,900+) responded.[8] This low response rate is itself an indicator of lack of broadband access. Of the respondents, the following table identifies the providers, two of which, Frontier and Choice Wireless, are predominant.

Providers	Count
Frontier	94
Choice (NTUA Wireless)	44
Sacred Wind Communications	8
Verizon	5
Cellular One	4
HughesNet	2
Comcast	1
River Canyon Wireless	1
Table Top Telephone Company	1
Viasat/Excede	1
Total:	**161**

In addition, Frontier's primary terrestrial offering is via copper-based digital subscriber line (DSL). This technology limits the Navajo entities that can subscribe as location must be within 1-2 miles of the Frontier central offices.

a. For those in the Tribe who have at-home broadband, what are average prices and average speeds, if such data is available?

RESPONSE:

The prices and speeds provided below are publicly available on each provider's website.

- Navajo Tribal Utility Authority – Wireless (NTUAW) has two plans with the following speeds: 9/3 Mbps and 12/2 Mbps. With CARES Act funding, NTUAW is working to install equipment that will result in speeds of 12/3 Mbps. Prices range from $49.99 to $64.99.
- Based on Frontier's online store, prices range from $37.99 to $117.99 with their bundles. Frontier advertises speeds "as fast as" 6 Mbps to "as fast as" 25 Mbps. Frontier provides service over copper lines for DSL; however, consumers report service is slow and speeds vary greatly.
- Sacred Wind offers multiple plans with speeds from 15 Mbps to 100 Mbps and prices range from $75.00 to $120.00.

Based upon the aforementioned survey, Of the 386 household respondents to the broadband survey, 115 respondents participated in an automated speed test measuring actual download and

[7] In December 2019 and into January 2020, two broadband surveys were completed to collect direct feedback from residents and businesses of the Navajo Nation. One survey gathered data from wireline users and the second was for cellular users. The survey was publicized in numerus radio and newspaper advertisements and links were provided on numerous Navajo websites. Hard copies of the survey were sent to all the Chapter Houses and notices were sent to schools by the Navajo Nation Department of Dine Education.
[8] Not all respondents indicated their provider.

upload broadband speeds and 176 respondents provided monthly pricing data for broadband and telecommunications.

Of the 115 speed test participants, 105 participants (91.3%) failed to meet the FCC broadband standard of 25 Mbps download speed and 98 participants (85.2%) failed to meet the 3 Mbps standard for upload speed. Of the 115 speeds tests, only 10 participants (8.7%) met the FCC definition of 25/3 broadband.

Excluding the top 10 speed responses, the following tables summarize the metrics for download and upload speeds:

Download (Mbps)	105	91.30%	< 25
	7	6.09%	25 < x < 100
	3	2.61%	> 100
n =	115		

Upload (Mbps)	98	85.22%	< 3
	15	13.04%	3 < x < 100
	2	1.74%	> 100
n =	115		

Excluding the top 10 speed test responses, the results are illustrative of the problems faced by Navajo Nation. The average download and upload speeds experienced by 105 of 115 speed test participants during the survey was 3.89/1.35, and the median was 1.89/0.84. These are dismal results, but typical of what is experienced at Navajo households--and that is only if they have broadband access.

(Mbps)	**Upload**	**Download**
Average	1.35	3.89
Median	0.84	1.89

# meet FCC std?	8	0

Of the 176 households providing pricing data, the following table summarizes a distribution of monthly communications subscription costs. 65 respondents (over 36%) pay more than $75 monthly for broadband services.

MRC	36	MRC <$50	20.45%
	75	$50 < MRC < $75	42.61%
	45	$75 < MRC < $100	25.57%
	20	MRC > $80	11.36%
Total:	176		100.00%

With the Tribal Lifeline maximum subsidy of only $34.25 monthly and 40% of Navajo Nation households living below the federal poverty line, broadband can be unaffordable to many, if not most, households.

b. What types of at-home broadband (e.g., fiber to the home, cable, DSL, WISP) are provided in your Tribe?

RESPONSE:

Fiber to the home is not available to residents of the Navajo Nation. Frontier has aged copper-based DSL, and other carriers offer a WISP product or cellular products with data cards.

The survey provides additional insights into the technologies available. Of the 386 household respondents to the broadband survey, the following table summarizes the technologies used.[9]

Connection Type	Count
Digital Subscriber Line ("DSL") or Phone ("POTS")	75
Fixed Wireless Antenna	28
Coaxial Cable / Cable TV	10
Satellite	9
Fiber-optic Cable ("fiber")	5
Other - Write In	5
Phone Tethering	3
Don't Know / Not Sure	16
Total:	**151**

3. To the degree this information is available and can be made public, which companies operate the 1,000 cell sites on Navajo lands that you stated in your testimony?

RESPONSE:

The 1,000 cell sites referenced in my written testimony for the July 8, 2020 hearing on "Addressing the Urgent Needs of Our Tribal Communities," are not all owned by the Navajo Nation. These 1,000 towers include broadcast radios, micro-wave links, private microwave, etc., and do not entirely represent cellular services and Wireless Internet Service Providers (WISP). Cellular communications are our primary source for internet access due to lengthy processes to obtain right-of-way permits across the multitude of land statuses that exist throughout the Navajo Nation.

Of the 1,000 towers, about a third provide cellular based services, provided by the regional carriers as they invest in build-out projects within the Navajo Nation. About 5 percent of these towers are from the National Service Providers. NTUAW has in the range of 120 towers, and Cellular One has about 150 towers. AT&T and Verizon each have a handful that exist on the edges of the boundaries of the Navajo Nation.

The following list represents the entities that are using towers:

- Choice Wireless (NTUAW);
- Cellular One;
- Verizon;

[9] Not all respondents identified their communications technology.

- AT&T;
- Government, including the FAA;
- Education institutions, including universities and schools;
- Broadcast stations for TV and AM/FM Radio.

4. Have state or municipal laws or regulations prohibited or inhibited the establishment, operations, or expansion of any of the broadband networks owned or operated by the Navajo Nation or partnerships between the Navajo Nation and companies?

RESPONSE:

State or municipal regulations are not hindering expansion of broadband networks on the Navajo Nation. Instead our challenges relate to federal laws and policies that limit access to the spectrum and hinder our ability to expand telecommunications infrastructure due to the regulatory processes for obtaining permits to lay fiber and expand telecommunication lines. National service providers like Verizon and AT&T, to name a few, hold the majority of the spectrum rights. This forces our regional carriers, like NTUAW and Sacred Wind, to sublease the spectrum rights for expansion into territories that do not have spectrum licenses.

For example, our regional carriers would like to expand services to the Navajo Nation's satellite community of Tohajiilee, a small community located about 20 miles west of Albuquerque, New Mexico, which is also part of the Navajo Indian Reservation of the Navajo Nation. However, due to the realities of the spectrum rights for this area, our regional carriers are unable to provide service in this community. A requirement for the spectrum license for coverage over this area is within the City of Albuquerque. Yet, the community of Tohajiilee lacks cellular coverage and the national carriers have chosen not to expand services to this area. This is just one of the many examples where our regional carriers are limited in their ability to expand into territories where the national carriers have and will not.

Lands held in Trust by the Federal government are managed by the US Department of the Interior's Bureau of Indian Affairs (BIA). State laws concerning land use do not apply to lands held in Trust. As stated previously, federal permitting rules issued by BIA have severely restricted broadband infrastructure investment and access across the Navajo Nation. The regulatory processes for laying fiber or expanding telecommunications infrastructure across Indian trust lands is a more significant impediment than state or municipal laws and regulations.

a. If so, would the protections in my legislation, H.R. 2785, the *Community Broadband Act,* which protects municipal and Tribal broadband networks from restrictive state laws, provide relief from these restrictive state laws?

RESPONSE:

Lands held in Trust by the Federal government are managed by the US Department of the Interior's Bureau of Indian Affairs (BIA). State laws concerning land use do not apply to lands held in Trust. As stated previously, federal permitting rules issued by BIA have severely restricted broadband infrastructure investment and access across the Navajo Nation.

The Honorable Tony Cárdenas (D-CA):

1. **Is Congress upholding its federal trust responsibilities for health by keeping the Indian Health Service's (IHS) funding discretionary? Should the IHS receive mandatory appropriations?**

RESPONSE:

Congress is failing to uphold its federal trust responsibility for American Indian health by keeping IHS funding discretionary. Congress should provide IHS mandatory appropriations to cure this ill. This response includes a summary of the Federal Indian laws and programs Congress uses in its attempt to meet its trust obligation, analysis of why Congress should authorize mandatory spending, and review of the consequences Indian Country and the Navajo Nation endure due to the lack of advance appropriations.

I. The Federal Trust Responsibility and IHS

The provision of health services to American Indians is based upon the federal government's trust responsibility[1] for Indian tribes, which is a legally enforceable fiduciary obligation of the United States derived from federal statutes, treaties, court decisions, executive actions, and the Constitution.[2] The Snyder Act of 1921[3] legislatively affirmed this trust responsibility by permanently authorizing federal Indian programs, including health-related programs, to the Bureau of Indian Affairs within the Department of Interior.

Historically, the federal government has treated tribal health care less as a trust obligation than an orphaned responsibility by transferring authority for its administration from one federal agency to another.[4] Today the federal obligation to provide healthcare to American Indians and Alaska Natives is funded by annual Interior Appropriations for Indian Health Service, which is an agency of the Department of Health and Human Services.

As time progressed, Congress continued building towards improving its trust obligation by authorizing programs to construct sanitation facilities for Indian Communities and homes.[5] Congress additionally authorized Indian Tribes and Tribal Organizations (IT/TO) to assume some control over the management of their health care services by negotiating "self-determination contracts" with IHS through the 1975 Indian Self-Determination and Education Assistance Act (ISDEAA).[6] One year later, the Indian Health Care Improvement Act (IHCIA)[7] authorized and outlined the national policy for health services administered to Indians; established health condition goals for the IHS service population; authorized collections from Medicare, Medicaid, and other third-party insurers; and established a demonstration project for ITs/TOs to directly receive reimbursements.

The ISDEAA and IHCIA were later amended to permit ITs/TOs to consolidate IHS self-determination contracts for multiple IHS programs into a single "self-governance compact."[8] These self-governance programs allowed facilities operated by ITs/TOs to directly bill Medicare, Medicaid, CHIP and other third-party payors and were later made permanent in 2000.[9] The Affordable Care Act[10] permanently reauthorized the IHCIA and serves as the statutory

foundation for the provision of health care to American Indians and Alaska Natives. In renewing the IHCIA, Congress reaffirmed the obligatory duty of the federal government to American Indians and Alaska Natives, declaring that "It is the policy of this nation, in fulfillment of its special trust responsibilities and legal obligations to Indians -- to ensure the highest possible health status for Indians and urban Indians and to provide all resources necessary to effect that policy."

II. Congress Should Authorize Mandatory Spending for IHS

Congressional judgement of whether the federal government is legally obliged to pay a person or government is what determines an entitlement.[11] It is difficult to imagine an obligation that better fits that criteria than the federal trust responsibility to provide for the healthcare of American Indians—a debt the United States owes tribal governments and their members for the land you are sitting on as you read this.

As the US Commission on Civil Rights explained in its 2018 Report to Congress, *Broken Promises*, "Treaties between the United States and tribal nations provide healthcare for Native Americans. Through these treaties, the seizure of tribal nations' land and resources by the United States was to be compensated by the federal governments' promise to . . . provide healthcare to tribal citizens."

Like Medicare beneficiaries, American Indians have earned their entitlement to federally funded health care through their contribution to the federal pot, a contribution that far exceeds the 1.45% of earnings employees pay into the Federal Insurance Contributions Act for Medicare. American Indians have paid in full with their land and resources.

Mandatory spending would provide the Indian Health Service, and the IT/TO providers with whom it contracts, the financial predictability, sustainability and protection from government shutdowns. Discretionary spending on IHS is chronically underfunded and the uncertainty has led to adverse financial effects on tribal health programs. A 2018 GAO Report to Congress that compared IHS program spending levels to those of other federal health care programs found that IHS's per capita spending in 2017 was just $4,078, compared to $8,109 for Medicaid, $10,692 for Veterans Health Administration, and $13,185 for Medicare.[12]

III. The Consequence of Business as Usual: The Cost American Indians are Paying with Their Lives

The Broken Promises Report is an accurate overview of the current way by which Congress funds tribal health care and raises a very real question of whether it is killing tribal communities. The life expectancy for Native peoples is 5.5 years less than the national average.[13] According to one study, Native American women are 4.5 times more likely than non-Hispanic white women to die while pregnant or "within 42 days of the termination of pregnancy, irrespective of the duration and site of the pregnancy or its management, but not from accidental or incidental causes."[14] The Center for Disease Control (CDC) found that, between 2005 and 2014, every racial group experienced a decline in infant mortality, except for Native Americans.[15] Native Americans experience infant mortality rates 1.6 times higher than non-Hispanic whites and 1.3 times the national average.[16]

The consequences for not providing mandatory funds to the IHS can be seen on the Navajo Nation. As of August 19, 2020, there are a total of 9,500 confirmed COVID-19 positive cases, and we have

lost 484 precious lives.[17] We have tested over 90,064 individuals since this crisis entered our borders. Reports from all twelve (12) health care facilities on and near the Navajo Nation indicate that approximately 6,989 individuals have recovered from the virus. For almost two months, the Navajo Nation saw the highest per capita COVID-19 infection rate in the United States, which is directly attributable to a breach of the U.S. federal government's trust responsibility to the Navajo Nation--a legally recognized obligation of the U.S. to protect tribal treaty rights, lands, assets, and resources, including guarantees for healthcare and infrastructure development.

These numbers weigh heavy on Navajo leadership and our Navajo People. Our elders are sacred keepers of our culture and one loss is one too many. The Navajo Nation is thankful for the partnership we have with IHS and Congress for their efforts throughout this pandemic. However, Congress should seriously consider the testimonies of each witness from this hearing and commit to ensuring the IHS receives the mandatory funding it deserves. All of us have learned a lot through this unprecedented pandemic and now there is an opportunity to work together to address the shortcomings and build an even stronger partnership that will better prepare us for possible future pandemics. Providing mandatory funding is the foundational step to ensuring our health systems are prepared.

The Honorable Tom O'Halleran (D-AZ):

1. Since the Cold War, over 524 abandoned uranium mines have been left scattered across the Navajo Nation. This uranium mining and milling was in support of the United States' efforts to develop a nuclear arsenal and to this day has left a toxic legacy throughout the Southwestern United States. However, the Department of Energy recently released a report entitled *Restoring America's Competitive Nuclear Energy Advantage*, which among other recommendations, advocates for streamlining regulations to expand domestic uranium mining on public lands, with an emphasis on the Southwest that would likely include lands near the Grand Canyon and Navajo Nation.

    a. **Do you believe the *Restoring America's Competitive Nuclear Energy Advantage* report's recommendations create a perverse incentive to expand domestic uranium mine that would only exacerbate the legacy abandoned uranium mine cleanup efforts already underway?**

    RESPONSE:

Yes, I agree. The *Restoring America's Competitive Nuclear Energy Advantage* report ("report") paints a picture of a uranium industry on the brink of collapse and argues that this endangers our national security. Consequently, the report proposes to open up lands and expand uranium mining around the Grand Canyon, which borders the Navajo Nation, and have the federal government purchase and use that ore to establish a uranium reserve, while also stripping the current regulatory processes. However, I have read that the United States has 585 tons of highly enriched uranium from dismantled nuclear warheads, most of which have been reserved for naval nuclear fuel and other defense purposes, and that will last for many decades before running out--if ever.[10]

[10] https://thebulletin.org/2020/04/uranium-supplies-are-not-a-us-national-security-problem-why-is-trump-pretending-the-opposite/

To me, this sounds like exacerbating the legacy of abandoned uranium mines without fully addressing the adverse impacts.bAs you are well aware, the Navajo people have suffered, and continue to suffer, enormous adverse impacts to their physical, emotional, and spiritual health as a result of the federal government's past investment in uranium extraction from the Navajo Nation. According to the U.S. Environmental Protection Agency, approximately thirty million tons of uranium ore was extracted during mining operations within the Navajo Nation from 1944 to 1986 and at least 524 former uranium mines exist on Navajo lands. Now, many decades later, environmental impacts of uranium extraction and processing on the Navajo Nation have not been addressed and health consequences continue to ravage the Navajo people. These mines continue to cause environmental devastation through un-remediated soil contamination and impacts to surface water and groundwater.

All this uranium mining and processing was directed and controlled by the federal government. The United States has been found to be responsible for cleanup of resulting contamination under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund). Enormous quantities of dangerous radioactive byproducts are stored in or near the Navajo Nation in at least five former uranium processing sites, and shipments of radioactive waste are routinely routed through the Navajo Nation, despite the opposition of the Navajo government and people. The report's recommendations would only exacerbate these issues.

As Navajo people, we were always taught to avoid making messes. However, if you do, clean it up. In this case, until the United States government has fully addressed the profound adverse consequences of its past uranium extraction, it should never consider taking any action that would support or encourage extraction or use of uranium or its byproducts on or around the Navajo Nation. Indeed, any effort by the federal government to do so only throws salt in an open wound and is environmentally irresponsible, ethically reprehensible, and an inexcusable affront to the Navajo people.

The Honorable Greg Walden (R-OR):

1. President Nez, according to the Indian Health Service, Navajo's have often banded together in small groups, often near a source of water and their wide dispersion across the reservation is due in part to the limited amount of grazing land and limited availability of water. You mentioned in your testimony the lack of a department regulating the reduction, disposal, transportation, and long-term storage of solid waste. Because of this proximity, I'm trying to better understand any potential impact from waste contamination on the Navajo Nation.

    a. **Can you elaborate more upon the detrimental effects this has on your Nation, including the increase risk in forest fires and damage to the waterways and soil?**

    RESPONSE:

Next to addressing the abandoned uranium mine legacy on the Navajo Nation, I would say that solid waste, or illegal dumping, poses our greatest environmental threat. Currently, the Navajo Nation does not have a solid waste materials management entity that addresses cradle-to-grave

materials management. This means that there exists no regional landfills or recycling centers located within its boundaries.

Additionally, due to the lack of available federal resources and funding, our solid waste management largely consists of a hodge-podge of local Chapters that are able to build, operate, and maintain transfer stations for their communities. But not every Chapter operates a trash disposal service for their respective communities, which leaves many communities without any legal dumping options forcing individuals to travel great distances to dispose of their household waste adding considerable time and expense. As a result, the number of illegal dump sites on the Navajo Nation is astronomical.

The Navajo Nation EPA (Navajo EPA) Resource Conservation and Recovery Program (RCRP) is the regulatory authority, under the Navajo Nation Solid Waste Act and regulations, tasked with issuing Notice of Violation civil enforcements for illegal dumping cases. RCRP also carries the following responsibilities: bilingual informal educational outreach, dual enforcement proceedings, prevention, regulatory development, clean up, community engagement and involvement, regulatory compliance assistance, and technical advisement.

According to past US Census population count on the Navajo Nation, the population has increased; as such, more home site leases are approved. With each home site lease approval, comes a source of household trash. Presently disposal of household non-hazardous trash is acceptable at open top-bins and transfer stations managed either by the Chapter house or by a Joint Power Agreement, like in San Juan County, New Mexico. What is not accepted are bulky waste items, electronics, tires, household hazardous waste, and construction demolition waste, arising from home sites which contribute to illegal trash dumping. Proper disposal would entail a household to drive to the nearest County legal landfill for proper disposal, which is often an over 100-mile round trip. A regional recycling facility that accepts bulky waste is needed, which is ideally located where people travel to for medical services, postal services, school, work, and grocery.

It is common to find tires, batteries, paint, aerosol cans, used oil and filters, automotive chemicals, household chemicals, etc. that have been dumped off bridges or into dry arroyos, and that will lead to the discharge of mercury, lead, cadmium, per- and polyfluoroalkyl substances, gasoline, antifreeze, diesel fuel, volatile organic compounds and other pollutants into our water ways. It is also not unusual for people to burn their household waste, which impacts our air quality. Additionally, I've been told by our environmental professionals that backyard burning is a frequent cause of residential, brush, and forest fires, particularly during drought conditions. Often, fire hazards are caused by burn piles or barrels left unattended, which grow too large or are not fully extinguished.

Three big rangelands wildfires (Kindalichee, Sawmill, and Asaayi) have occurred on the Navajo Nation in the recent past, due to backyard trash burning, which was exacerbated by the ongoing drought and windy conditions. These rangeland fires have impacted Sagebrush Pinion-Juniper habitat, Ponderosa pine forest habitat, and Alpine forest habitat, respectively; all rangeland wildfires originating from illegal trash burning has impacted ephemeral waterways such as dry arroyos, as well as perennial streams.

Recently, the following chemicals of concern have been found in waterways sampled by our Navajo Nation Environmental Protection Agency:

Atenolol - a beta blocker medication primarily used to treat high blood pressure and heart-associated chest pain.

Azithromycin - used to treat a wide variety of bacterial infections. It is a macrolide-type antibiotic.

Caffeine - a central nervous system stimulant of the methylxanthine class.

Carbamazepine – Anticonvulsant - can treat seizures, nerve pain, and bipolar disorder.

Cotinine - an alkaloid found in tobacco and is also the predominant metabolite of nicotine. Cotinine is used as a biomarker for exposure to tobacco, smoke. Cotinine is currently being studied as a treatment for depression, PTSD, schizophrenia, Alzheimer's disease and Parkinson's disease.

DEET - a brand of diethyltoluamide, a colorless oily liquid with a mild odor, used as an insect repellent.

Phenytoin (Dilantin) - an anti-epileptic drug, also called an anticonvulsant. Phenytoin works by slowing down impulses in the brain that cause seizures. Phenytoin is used to control seizures.

Sulfamethoxazole - (SMZ or SMX) is an antibiotic. It is used for bacterial infections such as urinary tract infections, bronchitis, and prostatitis and is effective against both gram negative and positive bacteria such as Listeria monocytogenes and E. coli.

TCEP - a flame retardant added to polyurethane foam and is found in furniture and baby products, as well as some plastics and carpet backing. In a 2002 study examining stream contaminants near industrial facilities, TCEP was one of the most common. TCEP is a foam additive that over time escapes from the foam of furniture and sticks to house dust. The dust subsequently lands on household surfaces, including toys and food, and is eventually ingested. Young children are the most likely to be exposed because of their tendency to put toys and their hands into their mouths.

TCPP - a chemical compound used as a flame retardant, plasticizer, and viscosity regulator in various types of polymers, including polyurethanes, polyester resins, and polyacrylates.

TDCPP - a flame retardant used in children's pajamas in the 1970s until it was eliminated from that use due to adverse health effects. Now, TDCPP is a widely used flame retardant added to polyurethane foam in furniture and baby products.

Receiving federal support for the creation and operation of a tribally run solid waste management program would afford the Navajo Nation the resources to bring critical solid waste disposal services to Navajo communities that face expensive and lengthy drive to a county landfill or illegal dumping.

b. Has the absence of a tribal department regulating waste disposal increased the effects of COVID-19 on the Navajo nation?

RESPONSE:

Yes, I believe it has. An increase in illegal trash dumping during the COVID-19 pandemic was largely due to the complete shutdown of the Navajo Nation tribal government at the onset of the pandemic which included closures of Chapter houses where trash disposal services occurred. After the complete shutdown, approximately a month later, the Navajo Nation tribal government determined what is essential services and Chapter house services provided for access to potable drinking watering points and trash collection disposal centers were all deemed to be essential services.

Because of the necessary travel restrictions, we've had to implement, we are experiencing a huge uptick in illegal dumping complaints across the Navajo Nation. We also have concerns about the excess medical and household waste that is being generated because of the pandemic. Indeed, things like disposal masks, gloves, etc., pose a new and potentially hazardous waste stream that must be safely addressed and accounted for.

The Honorable Michael C. Burgess (R-TX):

1. President Nez, tribal communities lack adequate broadband service more than any others in the nation. This is partly due to the often remote and rugged geographic location of tribes as well as limited infrastructure. As a result, many service providers have not deployed the needed infrastructure to tribal areas. The Congressional Research Service identified that

Native Americans have a lower rate of internet usage than other races and ethnicities, most likely due to the lack of service options.

a. Do you foresee a discrepancy in supply and demand should broadband infrastructure and service be deployed in full on tribal lands?

RESPONSE:

There is more than enough demand for broadband services across the vast Navajo Nation, a land base larger than West Virginia, to financially support broadband infrastructure and service deployment throughout our communities, which are located within 3 states, 5 congressional districts, 12 federal health service units, 13 counties, and a host of federal/state/tribal/parochial school programs that oversee a total of 137 schools.

Our institutional needs alone could absorb broadband supply. Our three-branch central government and 110 local governments called "Chapters" serve more than 300,000 citizens, implementing more federal programs and public services than do most jurisdictions. Our K-12 schools need enhanced and distance learning for 83,000 students, as do our two colleges for 4,000 post-secondary students. We have 5 regional health care facilities, 7 outpatient centers, 5 remote health stations, and a cancer treatment center that is the first and only of its kind on any Indian reservation in the country. Our entire health sector needs broadband to deliver 21st century medicine and utilize electronic health records.

We also need broadband to support our private sector, which includes heavy industry, light manufacturing, agriculture, retail, gaming, and tourism. Our private sector and tribal enterprises generate revenues that not only support our tribal economy, but the regional and national economy as well. If our business had broadband, they could do infinitely more, which would dramatically benefit the economy of Navajos and non-Navajos alike.

COVID-19 has made clear that Navajo families want and need broadband at home. Affordability is a concern for us, just as it is for most Americans. That is why competition among multiple service providers on the Navajo Nation is so important. Broadband infrastructure and service deployment on the Navajo Nation should encourage affordability, accountability, and consumer choice.